

AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Cancelled)

2. (Currently Amended) The apparatus of claim +7, wherein the access group eligibility message indicates what subscriber groups are eligible to operate in the cell for which the access group eligibility message is transmitted.

3. (Currently Amended) The apparatus of claim +7, wherein the access group eligibility message indicates what restriction groups are not eligible to operate in the cell for which the access group eligibility message is transmitted.

4. (Currently Amended) The apparatus of claim +7, wherein the access group eligibility message includes a bitmap which indicates eligibility for plural access groups.

5. (Currently Amended) The apparatus of claim +7, wherein the core network node, upon receipt of a location update request for the user equipment unit, classifies the user equipment unit in the at least one of plural access groups and generates for transmission to the user equipment unit through the radio access network an access group classification message which advises the user equipment unit as to which of the plural access groups the user equipment unit belongs.

6. (Cancelled)

7. (Currently Amended) ~~The apparatus of claim 6,~~ A telecommunications network comprising a radio access network which generates and transmits, in a broadcast channel over an air interface, an access group eligibility message which enables a user equipment unit which receives the access group eligibility message to make a determination whether the user equipment unit is eligible to operate or not operate in a cell for which the access group eligibility message is transmitted, the determination involving a comparison of access group eligibility information transmitted in the access group message and an access group classification, the access group classification having been generated by a core network node which classified the user equipment unit into at least one of plural access groups;

wherein the user equipment unit stores the access group classification obtained from an access group classification message in a memory at the user equipment unit;

wherein the user equipment unit upon receiving the access group eligibility message compares the stored access group classification with contents of the access group eligibility message to determine whether the user equipment unit is allowed access to the cell for which the access group eligibility message is transmitted.

8. (Original) The apparatus of claim 7, wherein the access group eligibility message includes a first bitmap which indicates eligibility for the plural access groups; wherein the access group classification message includes a second bitmap which advises the user equipment unit as to which of the plural access groups the user equipment unit belongs.

9. (Original) The apparatus of claim 8, wherein the user equipment unit performs a logical operation with respect to the first bitmap and the second bitmap to determine whether the user equipment unit is allowed access to the cell for which the access group eligibility message is transmitted.

10. (Original) The apparatus of claim 9, wherein the first bitmap indicates which of plural subscriber groups are eligible and the second bitmap indicates to which one(s) of plural subscriber groups the user equipment unit belongs, and wherein the logical

operation is a logical AND operation between corresponding bit positions of the first bitmap and the second bitmap.

11. (Original) The apparatus of claim 9, wherein the first bitmap indicates which of plural restriction groups are ineligible and the second bitmap indicates to which one(s) of plural restriction groups the user equipment unit belongs, and wherein the logical operation is a logical AND operation between corresponding bit positions of the first bitmap and the second bitmap.

12. (Original) The apparatus of claim 7, wherein the user equipment unit is in one of an IDLE mode and one of the following states of a CONNECTED mode:
CELL_FACH state; CELL_PCH state; and URA_PCH state.

13. (Currently Amended) The apparatus of claim ~~6~~7, wherein upon entering a new cell which involves a transition to a new location area, the user equipment unit checks the access group eligibility message transmitted for the new cell in order to compare the stored access group classification with contents of the access group eligibility message to determine whether the user equipment unit is allowed access to the new cell.

14. (Currently Amended) ~~The apparatus of claim 13,~~ A telecommunications network comprising a radio access network which generates and transmits, in a broadcast channel over an air interface, an access group eligibility message which enables a user equipment unit which receives the access group eligibility message to make a determination whether the user equipment unit is eligible to operate or not operate in a cell for which the access group eligibility message is transmitted, the determination involving a comparison of access group eligibility information transmitted in the access group message and an access group classification, the access group classification having been generated by a core network node which classified the user equipment unit into at least one of plural access groups;

wherein the user equipment unit stores the access group classification obtained from an access group classification message in a memory at the user equipment unit;

wherein upon entering a new cell which does not involve a transition to a new location area, the user equipment unit need not check the access group eligibility message to determine whether the user equipment unit is allowed access to the new cell.

15. (Currently Amended) The apparatus of claim ~~13~~ 14, wherein the access group classification is transmitted in an access group classification message which comprises one of a location update response and a location update reject message which includes the access group classification.

16. (Cancelled)

17. (Currently Amended) ~~The apparatus of claim 16,~~

A telecommunications network comprising a radio access network which generates and transmits, in a broadcast channel over an air interface, an access group eligibility message which enables a user equipment unit which receives the access group eligibility message to make a determination whether the user equipment unit is eligible to operate or not operate in a cell for which the access group eligibility message is transmitted, the determination involving a comparison of access group eligibility information transmitted in the access group message and an access group classification, the access group classification having been generated by a core network node which classified the user equipment unit into at least one of plural access groups:

wherein the access group classification message is one of a location update response and a location update reject message which includes the access group classification and a version field associated with the access group classification:

wherein upon receiving a subsequent core network message in the form of one of a location update response or location update reject message, the subsequent core network message including a potentially revised access group classification and a version field associated with the access group classification carried by the subsequent core network message, the user equipment unit determines, by comparing contents of the version field associated with the access group classification and the version field associated with the access group classification carried by the subsequent core network message, whether the user equipment unit should update its stored access group classification.

18. (Cancelled)

19. (Currently Amended) ~~The apparatus of claim 18,~~

A telecommunications network comprising a radio access network which generates and transmits, in a broadcast channel over an air interface, an access group eligibility message which enables a user equipment unit which receives the access group eligibility message to make a determination whether the user equipment unit is eligible to operate or not operate in a cell for which the access group eligibility message is transmitted, the determination involving a comparison of access group eligibility information transmitted in the access group message and an access group classification, the access group classification having been generated by a core network node which classified the user equipment unit into at least one of plural access groups wherein the access group classification message generated by the core network includes the access group classification and a version field associated with the access group classification:

wherein upon entering a new cell associated with a second core network, the user equipment unit receives an access group eligibility message transmitted for the new cell, the access group eligibility message transmitted for the new cell including a version field associated with the contents of the access group eligibility message transmitted for the new cell, and wherein the user equipment unit determines, by comparing contents of the version field associated with the access group classification and the version field associated with the access group eligibility message transmitted for the new cell, whether the user equipment unit should update its stored access group classification.

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43. (Currently Amended) The apparatus of claim ~~42~~46, wherein the access group eligibility message indicates what subscriber groups are eligible to operate in the cell for which the access group eligibility message is transmitted.

44. (Currently Amended) The apparatus of claim ~~42~~46, wherein the access group eligibility message indicates what restriction groups are not eligible to operate in the cell for which the access group eligibility message is transmitted.

45. (Currently Amended) The apparatus of claim ~~42~~46, wherein the access group eligibility message includes a bitmap which indicates eligibility for plural access groups.

46. (Currently Amended) ~~The apparatus of claim 45,~~ A user equipment unit which receives over an air interface an access group classification message and an access group eligibility message, the access group classification message being generated by a core network node for advising the user equipment unit as to which of the plural access groups the user equipment unit belongs, the access group eligibility message being generated by a radio access network node for specifying eligibility of plural access groups to operate or not operate in a cell for which the access group eligibility message is transmitted. the user equipment unit comprising:

an access controller which stores an access group classification obtained from the access group eligibility message and which compares the stored access group classification with contents of the access group eligibility message to determine whether the user equipment unit is allowed access to the cell for which the access group eligibility message is transmitted;

wherein the access group eligibility message includes a bitmap which indicates eligibility for plural access groups;

wherein the access group eligibility message includes a first bitmap which indicates eligibility for the plural access groups; wherein the access group classification message includes a second bitmap which advises the user equipment unit as to which of the plural access groups the user equipment unit belongs.

47. (Original) The apparatus of claim 46, wherein the user equipment unit performs a logical operation with respect to the first bitmap and the second bitmap to determine whether the user equipment unit is allowed access to the cell for which the access group eligibility message is transmitted.

48. (Original) The apparatus of claim 47, wherein the first bitmap indicates which of plural subscriber groups are eligible and the second bitmap indicates to which one(s) of plural subscriber groups the user equipment unit belongs, and wherein the logical operation is a logical AND operation between corresponding bit positions of the first bitmap and the second bitmap.

49. (Original) The apparatus of claim 47, wherein the first bitmap indicates which of plural restriction groups are ineligible and the second bitmap indicates to which one(s) of plural restriction groups the user equipment unit belongs, and wherein the logical operation is a logical AND operation between corresponding bit positions of the first bitmap and the second bitmap.

50. (Currently Amended) The apparatus of claim 42~~46~~, wherein the access group classification message is one of a location update response and a location update reject message which includes the access group classification.

51. (Currently Amended) The apparatus of claim 42~~46~~, wherein the access group classification message includes the access group classification and a version field associated with the access group classification.

52. (Currently Amended) ~~The apparatus of claim 51;~~

A user equipment unit which receives over an air interface an access group classification message and an access group eligibility message, the access group classification message being generated by a core network node for advising the user equipment unit as to which of the plural access groups the user equipment unit belongs, the access group eligibility message being generated by a radio access network node for specifying eligibility of plural access groups to operate or not operate in a cell for which the access group eligibility message is transmitted, the user equipment unit comprising:
an access controller which stores an access group classification obtained from the access group eligibility message and which compares the stored access group classification with contents of the access group eligibility message to determine whether the user equipment unit is allowed access to the cell for which the access group eligibility message is transmitted;

wherein the access group classification message includes the access group classification and a version field associated with the access group classification;

wherein upon receiving a subsequent core network message, the subsequent core network message including a potentially revised access group classification and a version field associated with the access group classification carried by the subsequent core

network message, the access controller determines, by comparing contents of the version field associated with the access group classification and the version field associated with the access group classification carried by the subsequent core network message, whether the user equipment unit should update its stored access group classification.

53. (Currently Amended) ~~The apparatus of claim 51,~~ A user equipment unit which receives over an air interface an access group classification message and an access group eligibility message, the access group classification message being generated by a core network node for advising the user equipment unit as to which of the plural access groups the user equipment unit belongs, the access group eligibility message being generated by a radio access network node for specifying eligibility of plural access groups to operate or not operate in a cell for which the access group eligibility message is transmitted, the user equipment unit comprising:

an access controller which stores an access group classification obtained from the access group eligibility message and which compares the stored access group classification with contents of the access group eligibility message to determine whether the user equipment unit is allowed access to the cell for which the access group eligibility message is transmitted;

wherein the access group classification message includes the access group classification and a version field associated with the access group classification;

wherein upon entering a new cell associated with a second core network, the user equipment unit receives an access group eligibility message transmitted for the new cell, the access group eligibility message transmitted for the new cell including a version field associated with the contents of the access group eligibility message transmitted for the new cell, and wherein the access controller determines, by comparing contents of the version field associated with the access group classification and the version field associated with the access group eligibility message transmitted for the new cell, whether the user equipment unit should update its stored access group classification.

54. (Cancelled)

55. (Currently Amended) The method of claim 5460, further comprising including in the access group eligibility message an indication of what subscriber groups are eligible to operate in the cell for which the access group eligibility message is transmitted.

56. (Currently Amended) The method of claim 5460, further comprising including in the access group eligibility message an indication of what restriction groups are not eligible to operate in the cell for which the access group eligibility message is transmitted.

57. (Currently Amended) The method of claim 5460, further comprising including in the access group eligibility message a bitmap which indicates eligibility for plural access groups.

58. (Currently Amended) The method of claim 5460, further comprising:
using a radio access network node to transmit the access group eligibility message;
at a core network node and upon receipt of a location update request for the user equipment unit, classifying the user equipment unit in at least one of plural access groups;

generating, for transmission to the user equipment unit through a radio access network, an access group classification message which advises the user equipment unit as to which of the plural access groups the user equipment unit belongs.

59. (Currently Amended) The method of claim 5460, further comprising storing in a memory at the user equipment unit the access group classification obtained from an access group classification message.

60. (Currently Amended) ~~The method of claim 59, further comprising~~
A method of operating a telecommunications network comprising:
transmitting, in a broadcast channel over an air interface, an access group
eligibility message generated by a radio access network;
receiving the access group eligibility message at a user equipment unit;
the user equipment unit using the access group eligibility message to make a
determination whether the user equipment unit is eligible to operate or not operate in a
cell for which the access group eligibility message is transmitted, the determination
involving a comparison of access group eligibility information transmitted in the access
group message and an access group classification which is generated by a core network
node;
further comprising storing in a memory at the user equipment unit the access
group classification obtained from an access group classification message;
the user equipment unit, upon receiving the access group eligibility message,
comparing the stored access group classification with contents of the access group
eligibility message to determine whether the user equipment unit is allowed access to the
cell for which the access group eligibility message is transmitted.

61. (Original) The method of claim 60, further comprising:
including in the access group eligibility message a first bitmap which indicates
eligibility for the plural access groups; and
including in the access group classification message a second bitmap which
advises the user equipment unit as to which of the plural access groups the user
equipment unit belongs.

62. (Original) The method of claim 61, further comprising performing a logical
operation with respect to the first bitmap and the second bitmap to determine whether the
user equipment unit is allowed access to the cell for which the access group eligibility
message is transmitted.

63. (Original) The method of claim 62, wherein the first bitmap indicates which of plural subscriber groups are eligible and the second bitmap indicates to which one(s) of plural subscriber groups the user equipment unit belongs, and wherein the logical operation is a logical AND operation between corresponding bit positions of the first bitmap and the second bitmap.

64. (Original) The method of claim 62, wherein the first bitmap indicates which of plural restriction groups are ineligible and the second bitmap indicates to which one(s) of plural restriction groups the user equipment unit belongs, and wherein the logical operation is a logical AND operation between corresponding bit positions of the first bitmap and the second bitmap.

65. (Currently Amended) The method of claim ~~5460~~, wherein the user equipment unit is in one of an IDLE mode and one of the following states of a CONNECTED mode: CELL_FACH state; CELL_PCH state; and URA_PCH state.

66. (Currently Amended) The method of claim ~~5460~~, further comprising:
upon the user equipment unit entering a new cell which involves a transition to a new location area, checking the access group eligibility message transmitted for the new cell; and
comparing the stored access group classification with contents of the access group eligibility message to determine whether the user equipment unit is allowed access to the new cell.

67. (Original) The method of claim 66, further comprising, upon the user equipment unit entering a new cell which does not involve a transition to a new location area, the user equipment unit not checking the access group eligibility message.

68. (Currently Amended) The method of claim ~~5460~~, wherein the access group classification is transmitted in an access group classification message which comprises one of a location update response and a location update reject message which includes the access group classification.

69. (Currently Amended) The method of claim ~~54~~60, further comprising including in an access group classification message the access group classification and a version field associated with the access group classification.

70. (Currently Amended) ~~The method of claim 69, further comprising:~~
A method of operating a telecommunications network comprising:
transmitting, in a broadcast channel over an air interface, an access group
eligibility message generated by a radio access network:
receiving the access group eligibility message at a user equipment unit:
the user equipment unit using the access group eligibility message to make a
determination whether the user equipment unit is eligible to operate or not operate in a
cell for which the access group eligibility message is transmitted, the determination
involving a comparison of access group eligibility information transmitted in the access
group message and an access group classification which is generated by a core network
node:
including in an access group classification message the access group classification
and a version field associated with the access group classification;

the user equipment unit receiving a subsequent core network message in the form of one of a location update response or location update reject message, the subsequent core network message including a potentially revised access group classification and a version field associated with the access group classification carried by the subsequent core network message;

the user equipment unit determining, by comparing contents of the version field associated with the access group classification and the version field associated with the access group classification carried by the subsequent core network message, whether the user equipment unit should update its stored access group classification.

71. (Cancelled)

72. (Currently Amended) ~~The method of claim 71, further comprising~~
A method of operating a telecommunications network comprising:
transmitting, in a broadcast channel over an air interface, an access group
eligibility message generated by a radio access network;
receiving the access group eligibility message at a user equipment unit;
the user equipment unit using the access group eligibility message to make a
determination whether the user equipment unit is eligible to operate or not operate in a
cell for which the access group eligibility message is transmitted, the determination
involving a comparison of access group eligibility information transmitted in the access
group message and an access group classification which is generated by a core network
node;
wherein an access group classification message generated by the core network
includes the access group classification and a version field associated with the access
group classification;

upon the user equipment unit entering a new cell associated with a second core network:

the user equipment unit receiving an access group eligibility message transmitted for the new cell, the access group eligibility message transmitted for the new cell including a version field associated with the contents of the access group eligibility message transmitted for the new cell; and

the user equipment unit determining, by comparing contents of the version field associated with the access group classification and the version field associated with the access group eligibility message transmitted for the new cell, whether the user equipment unit should update its stored access group classification.

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87. (Currently Amended) The apparatus of claim 74, wherein the access group eligibility information comprises a subscriber group having a composition pre-agreed with a network operator.

88. (Currently Amended) The apparatus of claim 4246, wherein the access group eligibility information comprises a subscriber group having a composition pre-agreed with a network operator.

89. (Currently Amended) The method of claim 5460, wherein the access group eligibility information comprises a subscriber group having a composition pre-agreed with a network operator.

90. (Currently Amended) The apparatus of claim 47, wherein the access group classification is received individually by the user equipment unit, and wherein the user equipment unit is configured to make the determination whether the user equipment unit is eligible to operate or not in the cell without the user equipment unit establishing a connection with the radio access network.

91. (Currently Amended) The apparatus of claim 4246, wherein the access group classification is received individually by the user equipment unit, and wherein the user equipment unit is configured to make the determination whether the user equipment unit is eligible to operate or not in the cell without the user equipment unit establishing a connection with the radio access network.

92. (Currently Amended) The method of claim 5460, further comprising:
the access group classification being received individually by the user equipment unit, and
the user equipment unit making the determination whether the user equipment unit is eligible to operate or not in the cell without the user equipment unit establishing a connection with the radio access network.